1. INTRODUCTION

This Commercial Vehicle Information Systems and Networks (CVISN) Guide to Phase Planning & Tracking shows how to organize and track progress of CVISN projects through their development and deployment.

This is one in a series of guides as shown in Figure 1–1. All guides are available from the CVISN Website [1]. We assume you have already read the *CVISN Guide to Program and Project Planning* [4]. Acronyms are defined in Appendix A of the *Introductory Guide to CVISN* [67] and explained in detail in the *ITS/CVO CVISN Glossary* [71].

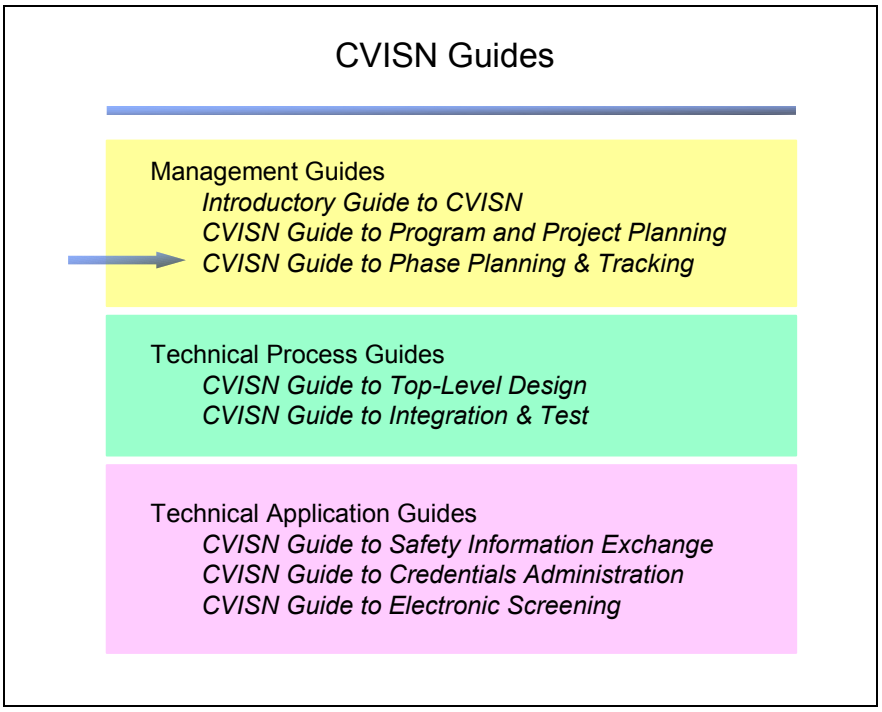

Figure 1-1. CVISN Guides

1.1 Purpose of this Guide

This guide will assist you by distributing the information, knowledge, insight, and experience of others who have traveled a comparable path. It is written for the Program Managers, Project Leaders, Product Technical Leads, and everyone else associated with executing a program or project on a day-to-day basis.

The goals of the Guide are:

- To help you achieve success.
- To make the project's experience a satisfying and career-enhancing one for those involved.

To those ends we define relevant terms, proclaim a few guiding principles, set forth planning and tracking operational concepts, and propose step-by-step tactical processes. We suggest some tools, and finally show examples of the resulting products.

Templates presented in this Guide are available in electronic form from the CVISN Website [1]. Wherever you can, use planning processes, formats, and tools consistent with your organization's existing standards; supplement where there are deficiencies.

1.2 Where Does Phase Planning Fit into the Program Lifecycle?

Recall from Reference [4] the CVISN program lifecycle diagram (Figure 1–2).

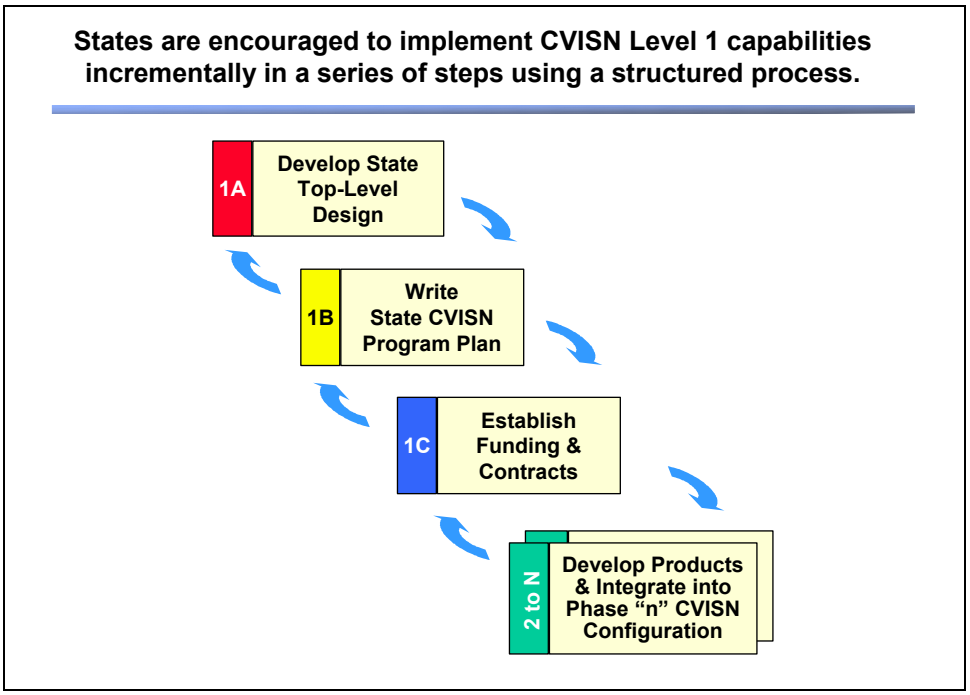

Figure 1-2. Major Steps in Your CVISN Program

You've already completed the steps in 1A, 1B, and 1C. As you begin to approach the first real chunk of development work, you need to put flesh on the bones of the program plan by decomposing the elements of the higher level plan in order to uncover and amplify the details necessary to accomplish the work on a day-to-day basis. This is when you'll do your first round of "phase planning."

Figure 1–3 expands the block shown as "2 to N" in the figure above to explain what occurs in each development / deployment loop.

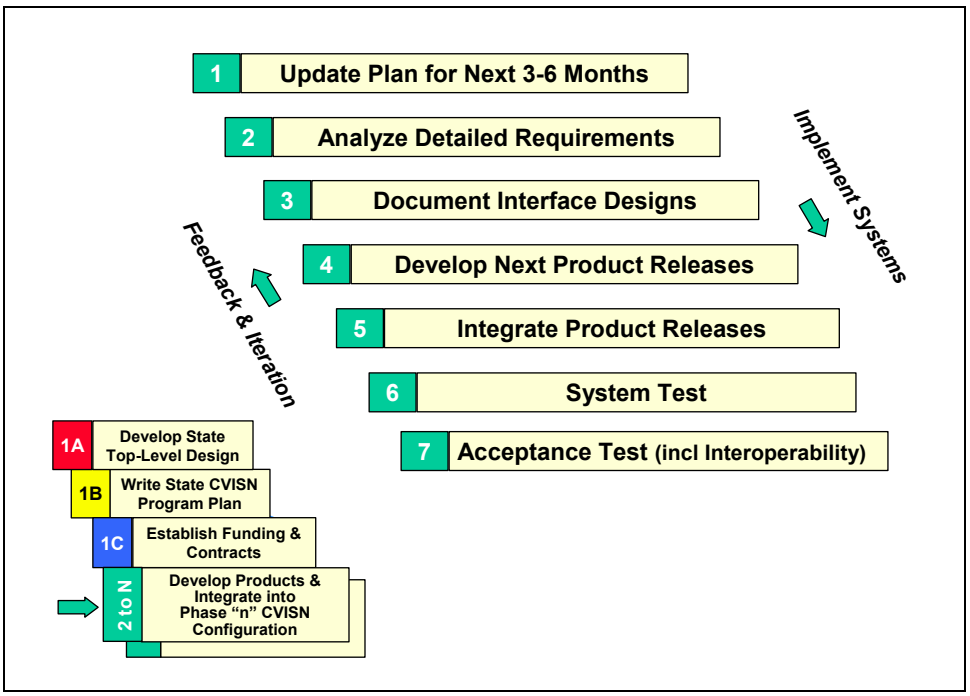

Figure 1-3. The Process for Phases 2 Through N: The Incremental Development Cycle

1.3 What is a Phase?

A phase is a period of time defined for planning purposes to allow incremental delivery of a complex system. Planning and implementing by phases reduces risk: it mitigates the adverse consequences of events such as the loss of a major stakeholder; a subcontractor who never performs and is replaced; or termination of development sooner than expected.

Each planning level (program, project, and product) may have its own phases. Figure 1–4, from the *CVISN Guide to Program and Project Planning* [4], illustrates this concept.

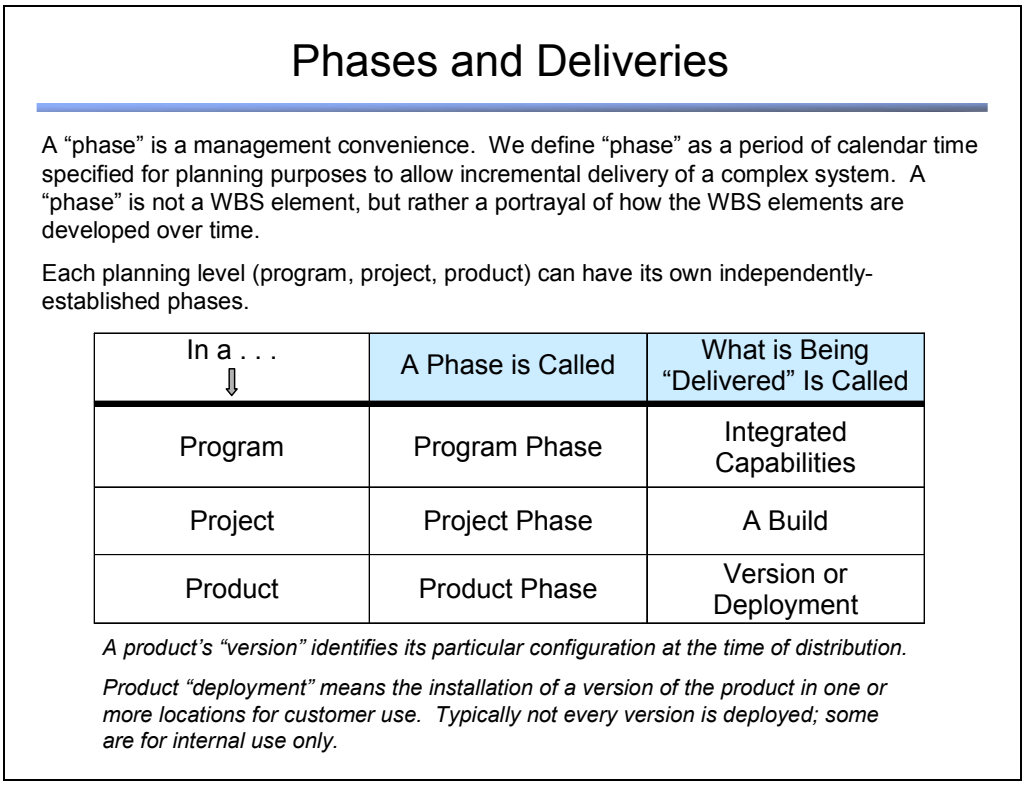

Figure 1-4. Phases and Deliveries

During each phase, products with user-oriented functionality are planned, developed, and released incrementally in a way that subsequent phases can build upon. The phase planning point in the CVISN deployment strategy is flagged in Figure 1–5. The output from the phase planning effort at the beginning of each phase is a Phase Plan; more about what that looks like later.

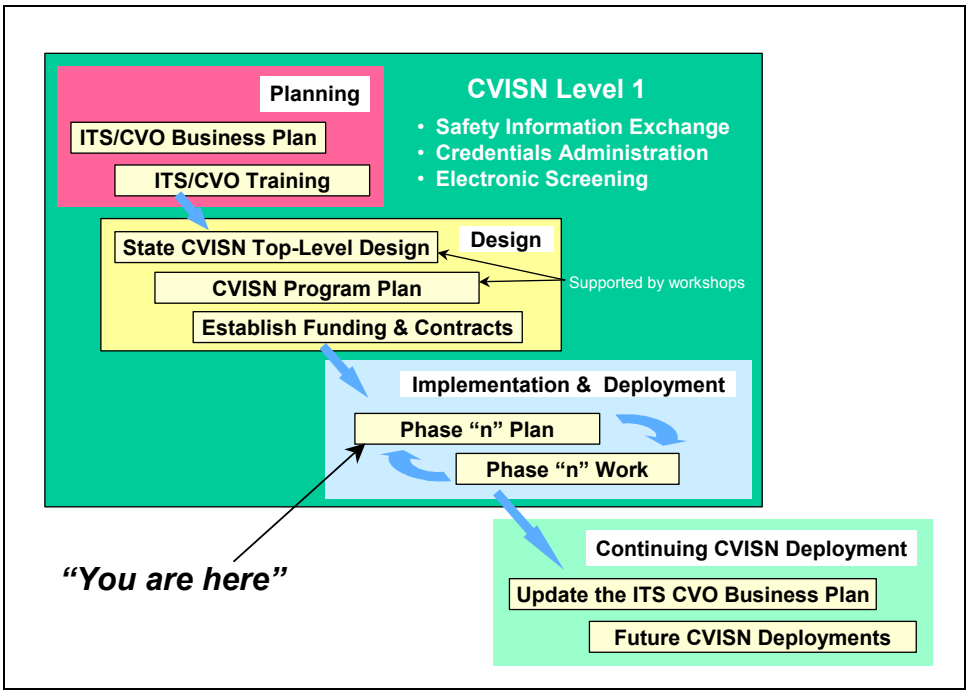

Figure 1-5. Each State Deploys CVISN Capabilities Incrementally Starting with Comprehensive Management and Technical Planning

A CVISN program phase is a roughly three to six month period during which some significant accomplishment occurs in at least one of the three main functional areas of safety information, credentials administration, or electronic screening. The first phase included the program planning (by definition) and is assumed to be complete. Each subsequent phase "n" (that is, 2, 3, 4, 5, ….) focuses on delivering a coordinated set of product versions that incrementally build up to the overall CVISN Level 1 capability. It might be convenient for you to start out assuming that every phase corresponds to a fixed calendar period, say 3, 4, or 6 months. After you've allocated work to phases, you might need to make some phases longer or shorter.

Note that it is not necessary to have significant accomplishments in every project in every program phase, since different projects may be in different stages of development in a given phase. For instance, in your safety project you may start by deploying more ASPEN units to your inspectors in Safety Project Phase 2. In your Credentials Project Phase 2, you may be trying to identify user requirements, or selecting a system developer.

Figure 1–6, portraying project management processes, is adapted from References [12] and [19]. Phase planning and tracking provide an iterative approach to project execution.

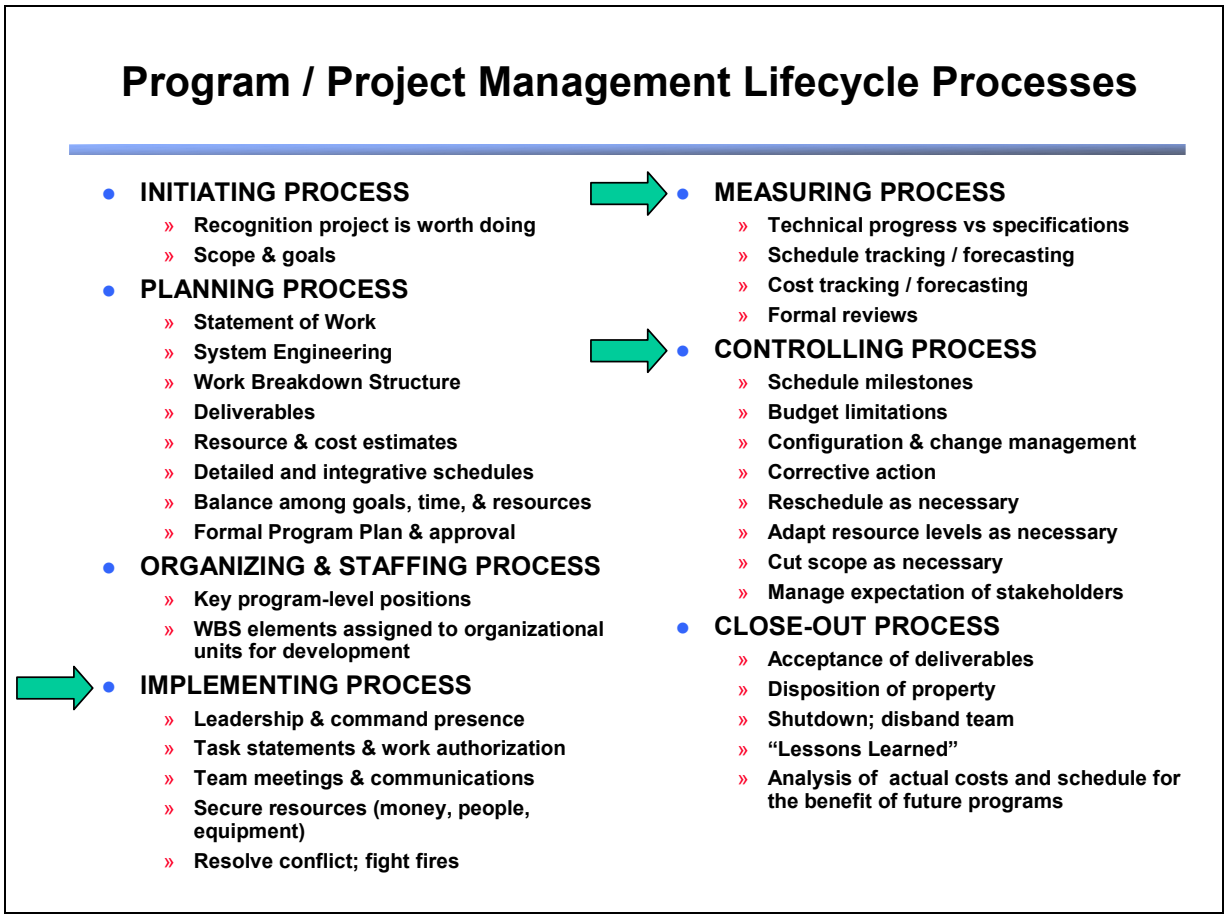

Figure 1-6. Phase Planning & Tracking Provide An Iterative Approach to Project Execution

1.4 What Does a Phase Plan Look Like?

The product of the phase planning effort at the beginning of each phase is a Phase Plan, captured principally in a detailed working-level schedule with resources assigned to each task. Along with that go key charts or tables useful for presenting status.

If the Project Plan is like a mountain climber's base camp, the Phase Plan is like their backpack. Think of the **Phase Plan as those key schedules and charts necessary for everyday work rather than as a bound document.** If you want to be genuinely organized, maintain a Project Leader's Notebook with the latest copies of these key schedules and charts. Figure 1–7 illustrates this concept. A good test of "key-ness" is that every such schedule and chart is just as useful for presenting status as it is for planning. If you make an effort to select and format key schedules and charts so that they are naturally useful for presenting status then, well – they will naturally be used. If they are naturally used, they will be kept up to date. If they are up to date, they will be easy to provide when you are have to present status. As a bonus you will continuously have an up-to-date Phase Plan.

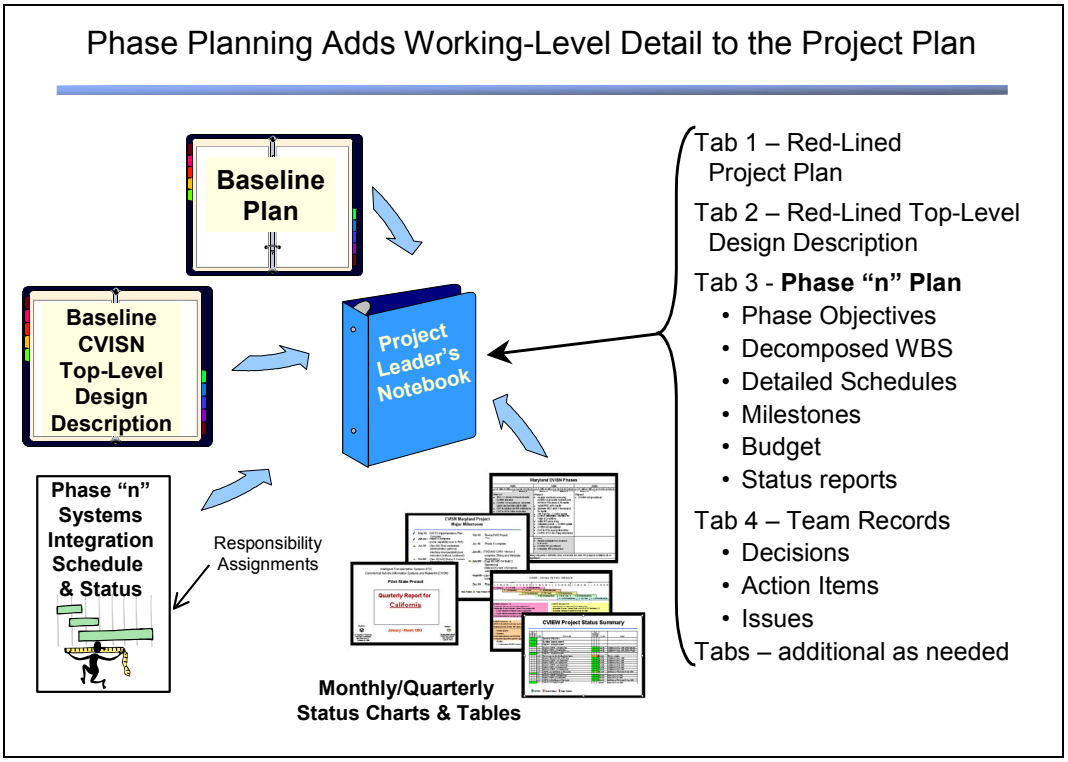

Figure 1-7. Project Leader's Notebook Keeps Up-to-Date Phase Plan Readily at Hand

1.5 We Already Have a Program Plan and Project Plans, Do We Really Need Phase Plans?

A Phase Plan **adds necessary detail** to the higher-level overall project plan, in order to identify, facilitate, and track demonstrable progress. Phase plans are vital because:

- They help maintain focus on objectives.
- When things change, participants can see the impact and adjust to get back on track.
- Without the detail in the phase plan it is difficult to recognize all the work and know that you have actually done everything necessary to successfully complete the project.

Recall that Chapter 1 of the *CVISN Guide to Program and Project Planning* [4] made the distinction between the CVISN **program** as a whole, and its subsidiary deployment **projects**. Phase planning / tracking occurs primarily at the project level, not at the program level, in order to properly focus on very specific activities performed by small teams or individuals.

Each CVISN **Project Leader** develops their own **project Phase Plan**. The technical leaders of the project's relevant products assist. The Phase Plan will show how the project's objectives for

a particular phase will be met, and how the products will be integrated to achieve project-level capabilities. Conversely, the CVISN Program Manager develops the **program phase plan**, drawing upon the subsidiary project Phase Plans to prepare a summary-level view that shows how the projects will be integrated to achieve program-level capabilities; it should be packaged as a presentation to an executive-level audience.

Each Project Leader consults with the Program Manager, the other Project Leaders, and with the line supervisors of the staff assigned to the project. The notion is that phase planning for each project can be done somewhat independently, yet must be coordinated with related projects.

The way project data are summarized into program-level status tends to be very dependent on the preferences and style of the program manager. The phase planning material should be designed to support tracking and status reporting. Keeping the planning and tracking material on-line, for example on a local area network server accessible to all staff, makes it easier to keep the plans and status information up-to-date.